

Codebook for data set of

Paper 16.2

Baillon, Aurélien, Han Bleichrodt, Ning Liu, & Peter P. Wakker (2016) "Group Decision Rules and Group Rationality under Risk," *Journal of Risk and Uncertainty* 52, 99–116.

Each line represents the decisions and information of one subject.

experimentID

The experimentID that a subject participated in ranges from 1 to 53, ordered temporarily. For example, experimentID=15 indicates that the subject participated in the 15th experiment conducted for this project.

SubjectID

Similarly to experimentID, SubjectID is ordered temporarily. The smaller this variable is, the earlier the experiment that this subject participated in. Each time we invited three subjects in one experiment, and the SubjectID within these three subjects were assigned arbitrarily.

Treatment

The treatment was randomly determined. It indicated the rules that subjects were asked to follow when making decisions in stage 2, with 1 corresponding to control treatment, 2 to majority treatment, and 3 to unanimity treatment. Subjects received different instructions in stage 2, and those in the control treatment answered a different version of the questionnaire than those in the majority or unanimity treatments.

No.1-No.75

These variables recorded the choices subjects make in the corresponding questions. No.1-25 were answered in stage 1, No. 26-50 in stage 2, and No. 51-75 in stage 3. Score 1 means that the subject chose lottery A in the corresponding question, and score 2 means that she chose lottery B. Missing data were coded as 1.5.

Color

Subjects were given ball-pens with three different colors to answer questions in the experiment. This way, we can relate questions and questionnaires answered by the same subject within one experiment without violating their anonymity. 1 means blue, 2 means red, and 3 means black.

The three ball-pens were randomly assigned to the three seats in the experiment room each time before the subjects entered the room.

Seat

There were three seats, from the experimenter's perspective, left (=1), middle(=0), and right(=1). After the subjects entered the room, they were each asked to draw a ticket to randomly decide which seat to sit on.

Location

The experiments were conducted previously in Erasmus Behavioral Lab (EBL) (=1), followed by experiments conducted in office room in Erasmus university Rotterdam H building (=2). The subjects are recruited by the same system from the same subject pool and the indoor settings were kept similar in the two rooms.

Experiment room in EBL:



Experiment room in office:



I1-I7

These were seven arguments for people to consider when answering questions. Subjects were asked to rate the degree to which they agreed with these arguments from 1(disagree strongly) to 7 (agree strongly).

II1-II7

These were seven arguments for people to use in group discussions. Subjects were asked to rate the degree to which these arguments described the arguments the subjects used in group discussion in the experiment, from 1(disagree strongly) to 7 (agree strongly).

III1-III10

These were ten personality traits questions.

gender

Gender of the subject; 0: female; 1: male.

Missing

Whether there were missing answers by this subject to the 75 questions; 0: no missing answers; 1: at least one missing answer.

S1INS, S2INS, S3INS

Each recorded the time when instruction were handed out at stage 1, 2, and 3, respectively.

S1ANS, S2ANS, S3ANS

Each recorded the time when subjects started to answer questions at stage 1, 2, and 3, respectively.

QUESTIONNAIRE

At what time the questionnaires were handed out.

FIN

At what time the subjects finished filling out questionnaires.

Ins1, Ins2, Ins3

Calculated time duration for subjects reading instructions at stage 1, 2, and 3, respectively.

Stage1, Stage2, Stage3

Calculated time duration for subjects answering questions at stage 1, 2, and 3, respectively.

Questionnaire

Calculated time duration for subjects filling in questionnaires.

Monotonocity

Whether the subjects brought about discussions concerning stochastic dominance choices for the monotonicity questions, based on scripts taken by the experimenter during the experiment. Scripts are available upon request from the authors.

Group_gender

This variable recorded the number of males in the group, indicating gender diversity of the group.

R1S1, C1S1, M1S1

These variables were calculated based on a single question (for monotonicity) or a pair of questions (for common ratio or common consequence effect).

For monotonicity questions, choosing A indicates violation of monotonicity, while choosing B indicates no violation of EU.

For common ratio effect and for common consequence effect, choosing A in both of the two questions in a pair or choosing B in both questions in a pair indicates no violation of EU. Choosing differently (A and B, or B and A) in one pair of two questions indicates violating EU.

R1S1

“R” represents “common ratio effect”, and “s” represents “stage”. R1S1 indicates the first common ratio effect pair at stage 1. (=1 indicates consistent with Expected Utility, =-1 means common ratio effect, and =0 means that answers are incomplete)

C1S1

C represents common consequence effect, and s represents stage. R1S1 indicates the first common consequence effect pair at stage 1. (=1 indicates consistent with Expected Utility, =-1 means common consequence effect, and =0 means that answers are incomplete)

M1S1

M represents monotonicity, and s represents stage. M1S1 indicates the first monotonicity question at stage 1. (=1 indicates consistent with Expected Utility, =-1 means that violating monotonicity)

The "first choice" in CC (Table 4) and CR (Table 6) was not always the question with smaller number. Please see the table below for which question in each pair corresponds with the "first choice".

	First Choice	Second choice
stage 1		
CR1	No.2	No.16
CR2	No.19	No.7
CR3	No.21	No.10
CR4	No.18	No.14
CR5	No.24	No.15
CC1	No.1	No.20
CC2	No.4	No.22
CC3	No.12	No.5
CC4	No.11	No.17
stage 2		
CR1	No.26	No.30
CR2	No.27	No.49
CR3	No.31	No.38
CR4	No.33	No.36
CR5	No.41	No.37
CC1	No.46	No.28
CC2	No.32	No.39
CC3	No.34	No.40
stage 3		

CR1	No.52	No.60
CR2	No.54	No.62
CR3	No.56	No.57
CR4	No.63	No.74
CR5	No.73	No.72
CC1	No.55	No.65
CC2	No.69	No.58
CC3	No.59	No.66

Concerning the five common ratio pairs in stage 1 mentioned in your email, I have the following table, which gives the 41% SR patterns reported in the paper (pp. 111).

	First Choice	Second choice	SS	RR	SR	RS
stage 1						
CR1	No.2	No.16	40	38	64	12
CR2	No.19	No.7	34	38	72	12
CR3	No.21	No.10	50	30	64	12
CR4	No.18	No.14	43	38	62	13
CR5	No.24	No.15	58	27	56	15

The calculations are based on the following list:

Variable	Corresponding question or question pair
R1S1	No.2+No.16
R2S1	No.7+No.19
R3S1	No.10+No.21
R4S1	No.14+No.18
R5S1	No.15+No.24
C1S1	No.1+No.20
C2S1	No.4+No.22
C3S1	No.5+No.12
C4S1	No.11+No.17
M1S1	No.6
M2S1	No.9
M3S1	No.13
M4S1	No.23
M5S1	No.25
R1S2	No.26+No.30
R2S2	No.27+No.49
R3S2	No.31+No.38
R4S2	No.36+No.33
R5S2	No.37+No.41
C1S2	No.28+No.46
C2S2	No.32+No.39
C3S2	No.34+No.40
M1S2	No.35
M2S2	No.42
M3S2	No.44

M4S2	No.47
M5S2	No.50
R1S3	No.52+No.60
R2S3	No.54+No.62
R3S3	No.56+No.57
R4S3	No.63+No.74
R5S3	No.72+No.73
C1S3	No.55+No.65
C2S3	No.58+No.69
C3S3	No.59+No.66
M1S3	No.51
M2S3	No.64
M3S3	No.67
M4S3	No.71
M5S3	No.75

The variables above were computed by the following syntax:

COMPUTE R1S1=(No.2-1.5)*(No.16-1.5)*4.

COMPUTE R2S1=(No.7-1.5)*(No.19-1.5)*4.

COMPUTE R3S1=(No.10-1.5)*(No.21-1.5)*4.

COMPUTE R4S1=(No.14-1.5)*(No.18-1.5)*4.

COMPUTE R5S1=(No.15-1.5)*(No.24-1.5)*4.

COMPUTE C1S1=(No.1-1.5)*(No.20-1.5)*4.

COMPUTE C2S1=(No.4-1.5)*(No.22-1.5)*4.

COMPUTE C3S1=(No.5-1.5)*(No.12-1.5)*4.

COMPUTE C4S1=(No.11-1.5)*(No.17-1.5)*4.

COMPUTE M1S1=No.6*2-3.

COMPUTE M2S1=No.9*2-3.

COMPUTE M3S1=No.13*2-3.

COMPUTE M4S1=No.23*2-3.

COMPUTE M5S1=No.25*2-3.

COMPUTE R1S2=(No.26-1.5)*(No.30-1.5)*4.

COMPUTE R2S2=(No.27-1.5)*(No.49-1.5)*4.

COMPUTE R3S2=(No.31-1.5)*(No.38-1.5)*4.

COMPUTE R4S2=(No.33-1.5)*(No.36-1.5)*4.

COMPUTE R5S2=(No.37-1.5)*(No.41-1.5)*4.

COMPUTE C1S2=(No.28-1.5)*(No.46-1.5)*4.

COMPUTE C2S2=(No.32-1.5)*(No.39-1.5)*4.

COMPUTE C3S2=(No.34-1.5)*(No.40-1.5)*4.

COMPUTE M1S2=No.35*2-3.

COMPUTE M2S2=No.42*2-3.

COMPUTE M3S2=No.44*2-3.

COMPUTE M4S2=No.47*2-3.

COMPUTE M5S2=No.50*2-3.

COMPUTE R1S3=(No.52-1.5)*(No.60-1.5)*4.

COMPUTE R2S3=(No.54-1.5)*(No.62-1.5)*4.

COMPUTE R3S3=(No.56-1.5)*(No.57-1.5)*4.

COMPUTE R4S3=(No.63-1.5)*(No.74-1.5)*4.

COMPUTE R5S3=(No.72-1.5)*(No.73-1.5)*4.

COMPUTE C1S3=(No.55-1.5)*(No.65-1.5)*4.

COMPUTE C2S3=(No.58-1.5)*(No.69-1.5)*4.

COMPUTE C3S3=(No.59-1.5)*(No.66-1.5)*4.

COMPUTE M1S3=No.51*2-3.

COMPUTE M2S3=No.64*2-3.

COMPUTE M3S3=No.67*2-3.

COMPUTE M4S3=No.71*2-3.

COMPUTE M5S3=No.75*2-3.

CRE_S1, CRE_S2, CRE_S3

They recorded the average percentage of EU violations revealed by the common ratio effect pairs at stage 1, 2, 3, respectively.

CCE_S1, CCE_S2, CCE_S3

They recorded the average percentage of EU violations revealed by the common consequence effect pairs at stage 1, 2, 3, respectively.

MON_S1, MON_S2, MON_S3

They recorded the average percentage of EU violations revealed by the monotonicity questions at stage 1, 2, 3, respectively.

The variables above were computed by the following syntax:

DATASET ACTIVATE DataSet1.

COMPUTE CRE_S1=(R1S1*(R1S1-1)+R2S1*(R2S1-1)+R3S1*(R3S1-1)+R4S1*(R4S1-1)+R5S1*(R5S1-1))/(R1S1*R1S1+R2S1*R2S1+R3S1*R3S1+R4S1*R4S1+R5S1*R5S1)/2.

COMPUTE CRE_S2=(R1S2*(R1S2-1)+R2S2*(R2S2-1)+R3S2*(R3S2-1)+R4S2*(R4S2-1)+R5S2*(R5S2-1))/(R1S2*R1S2+R2S2*R2S2+R3S2*R3S2+R4S2*R4S2+R5S2*R5S2)/2.

COMPUTE CRE_S3=(R1S3*(R1S3-1)+R2S3*(R2S3-1)+R3S3*(R3S3-1)+R4S3*(R4S3-1)+R5S3*(R5S3-1))/(R1S3*R1S3+R2S3*R2S3+R3S3*R3S3+R4S3*R4S3+R5S3*R5S3)/2.

COMPUTE CCE_S1=(C1S1*(C1S1-1)+C2S1*(C2S1-1)+C3S1*(C3S1-1)+C4S1*(C4S1-1))/(C1S1*C1S1+C2S1*C2S1+C3S1*C3S1+C4S1*C4S1)/2.

COMPUTE CCE_S2=(C1S2*(C1S2-1)+C2S2*(C2S2-1)+C3S2*(C3S2-1))/(C1S2*C1S2+C2S2*C2S2+C3S2*C3S2)/2.

COMPUTE CCE_S3=(C1S3*(C1S3-1)+C2S3*(C2S3-1)+C3S3*(C3S3-1))/(C1S3*C1S3+C2S3*C2S3+C3S3*C3S3)/2.

COMPUTE MON_S1=(M1S1+M2S1+M3S1+M4S1+M5S1-5)*(-1/2)/5.

COMPUTE MON_S2=(M1S2+M2S2+M3S2+M4S2+M5S2-5)*(-1/2)/5.

COMPUTE MON_S3=(M1S3+M2S3+M3S3+M4S3+M5S3-5)*(-1/2)/5.